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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,605	12/26/2001	Karl-Heinz Schuster	00119	4510

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Walter Ottesen
Patent Attorney
P.O. Box 4026
Gaithersburg, MD 20885-4026

EXAMINER	
KIM, PETER B	

ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 08/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/025,605	SCHUSTER ET AL.	
	Examiner	Art Unit	
	Peter B. Kim	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-14 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-14 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 122001 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

Claims 7, 11, 13 and 14 are objected to because of the following informalities: Regarding Claim 7, the projection objective wherein the objective has a numerical aperture of at least 0.9 is not disclosed in the written description. Regarding Claim 11, the terms "arranged at the object end" and "following lenses" is not clear. Regarding Claim 13, wavelength less than 25 nm is not disclosed in the written description, regarding Claim 14, the use of ultraviolet laser light is not disclosed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4 and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Reinecke et al. (2003/0112525).

Reinecke discloses on page 3, a projection objective comprising a first lens group of biconvex lens having only positive refractive power (1); a second lens group of negative refractive power (2); at least one additional lens group having positive refractive power and having a diaphragm mounted therein (diaphragm, 3-7); having a number of lenses of positive power arranged forward of the diaphragm (3, 6, 7) where the number of the positive lenses in the first group is less than the number of positive lenses in the additional lens group arranged

forward of the diaphragm. Renecke also discloses all of the lenses of the first lens group and all of the lenses of the second lens group having identical diameters where all the lens surfaces are almost the same sizes where the surfaces are less than a multiple of 1.3 and the diameters of lens arranged at the object end are half as large as the following lenses (see tables on page 4).

Claims 1, and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoneyama (2002/0060859).

Yoneyama discloses on page 2 and Fig. 1, a projection objective comprising a first lens group of lens having only positive refractive power (L1, L2); a second lens group of negative refractive power (G2); at least one additional lens group (G3) having positive refractive power and having a diaphragm (4) mounted therein; having a number of lenses of positive power arranged forward of the diaphragm (L9-L11) where the number of the positive lenses in the first group is less than the number of positive lenses in the additional lens group arranged forward of the diaphragm. Yoneyama discloses at least one aspheric lens (L1) in the first lens group wherein the asphericity deviates by more than 200 micrometer compared to the best fitting spherical lens surface (see tables on page 5 and 6). Yoneyama also discloses all of the lenses of the first lens group and all of the lenses of the second lens group having identical diameters where all the lens surfaces are almost the same sizes where the surfaces are less than a multiple of 1.3 and the diameters of lens arranged at the object end are half as large as the following lenses (see tables on page 5 and 6).

Claims 1-5, and 8-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. (Takahashi) (2002/0044260).

Takahashi discloses on page 19 and Fig. 13, a projection objective comprising a first lens group of biconvex lens having only positive refractive power (L12, L13); a second lens group of negative refractive power (G2); at least one additional lens group (G3) having positive refractive power and having a diaphragm (AS) mounted therein; having a number of lenses of positive power arranged forward of the diaphragm (L36-L311) where the number of the positive lenses in the first group is less than the number of positive lenses in the additional lens group arranged forward of the diaphragm. Takahashi discloses at least one aspheric lens (L12) wherein the asphericity deviates by more than 200 micrometer compared to the best fitting spherical lens surface (see tables on page 20). Takahashi also discloses all of the lenses of the first lens group and all of the lenses of the second lens group having identical diameters where all the lens surfaces are almost the same sizes where the surfaces are less than a multiple of 1.3 and the diameters of lens arranged at the object end are half as large as the following lenses (see tables on page 20). Takahashi also discloses a projection exposure system for microlithography and a method for making a microstructured component utilizing the projection exposure system including a light source of excimer laser (para 0225) and a projection objective as discussed above and the method comprising the steps of introducing a mask (R) and a substrate (W) and exposing the light-sensitive layer of the substrate and developing the substrate (Fig. 16).

Claims 1, 3, 4, and 6-14 rejected under 35 U.S.C. 102(a) as being anticipated by Shigematsu (6,259,508).

Shigematsu discloses in the abstract and Fig. 2, a projection objective comprising a first lens group of biconvex lens having only positive refractive power (L13, L14); a second lens group of negative refractive power (G2); at least one additional lens group (G5) having positive

refractive power and having a diaphragm (AS) mounted therein; having a number of lenses of positive power arranged forward of the diaphragm (L54-L57) where the number of the positive lenses in the first group is less than the number of positive lenses in the additional lens group arranged forward of the diaphragm. Shigematsu discloses the projection objective wherein it has a numerical aperture of at least 0.8 (col. 23, line 15-18). Shigematsu also discloses all of the lenses of the first lens group and all of the lenses of the second lens group having identical diameters where all the lens surfaces are almost the same sizes where the surfaces are less than a multiple of 1.3 and the diameters of lens arranged at the object end are half as large as the following lenses (see tables on col. 10-14). Shigematsu also discloses a projection exposure system for microlithography and a method for making a microstructured component utilizing the projection exposure system including a light source of excimer laser (col. 4, lines 51-65) and a projection objective as discussed above and the method comprising the steps of introducing a mask (R) and a substrate (W) and exposing the light-sensitive layer of the substrate and developing the substrate (Fig. 1).

Claims 1 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Endo (5,903,400).

Endo discloses in the abstract and Fig. 3, a projection objective comprising a first lens group of biconvex lens having only positive refractive power (L13, L14); a second lens group of negative refractive power (G2); at least one additional lens group (G4) having positive refractive power and having a diaphragm (AS) mounted therein; having a number of lenses of positive power arranged forward of the diaphragm (L42-L45) where the number of the positive lenses in the first group is less than the number of positive lenses in the additional lens group arranged

forward of the diaphragm. Endo discloses all of the lenses of the first lens group and all of the lenses of the second lens group having identical diameters where all the lens surfaces are almost the same sizes where the surfaces are less than a multiple of 1.3 and the diameters of lens arranged at the object end are half as large as the following lenses (see tables 1-3). Endo also discloses a projection exposure system for microlithography and a method for making a microstructured component utilizing the projection exposure system including a light source of excimer laser (col. 11, lines 49-65) and a projection objective as discussed above and the method comprising the steps of introducing a mask (M) and a substrate (P) and exposing the light-sensitive layer of the substrate and developing the substrate (Fig. 1, 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Kim whose telephone number is (703) 305-0105. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 6:00 PM. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703 308 2847. The fax phone numbers for the organization where this application or proceeding is assigned is 703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306- 3431.

Peter B. Kim
Patent Examiner
August 11, 2003